

LWIR A-Thermal – commercial off the shelf lens

# RP-042A

LWIR 4.2 mm Ultra Wide FOV  
A-Thermal Lens



## FEATURES / APPLICATIONS / CAPABILITIES

- Widest FOV available for QVGA detectors
- Suitable for applications where single camera should cover large area
- A-Thermal design with excellent performance over the entire FOV
- Supports multiple detector types: 384 x 288 x 25μ pitch / 640 x 480 x 17μ pitch

PARAMETER		VALUE	NOTES
Main	Sub		

OPTICAL			
<b>Focal Length / F#</b>		4.2 mm / F1.1	Nominal values.
<b>Detector (FPA) type / size</b>		384 x 288 pixels x 25 microns 640 x 480 pixels x 17 microns	For 17 microns detector applications please inquire <b>"RP-042A / 17 grade"</b> lens
<b>FOV (degrees)</b>		FOV: 140°(H) x 97° (V)	For detector size of 9.6 x 7.2 mm (384 x 288 x 25μ)
		FOV: 152°(H) x 112° (V)	For detector size of 10.88 x 8.16 mm (640 x 480 x 17μ)
Optical Coatings			
	<b>All internal surfaces</b>	High efficiency AR coating	Average transmission: 92%
	<b>Front surface</b>	High durability AR coating	DLC is available upon request
<b>Optical Total lens track</b>		48 mm	Nominal
<b>Optical Back Focal Length</b>		11 mm	Nominal
MECHANICAL			
<b>Mechanical Back Focal Length</b>		9 mm	Nominal
<b>Focus Range</b>		0.5 - Infinity	
<b>Total Weight</b>		140 gram	Nominal
<b>External Dimensions</b>		Front Diameter: 45 mm; Rear Diameter: 85 mm Length: 39 mm	
ENVIRONMENTAL			
<b>Operating Temperature</b>		-30°C to +50°C	A-Thermal lens over 80°C span
<b>Storage Temperature</b>		-40°C to +70°C	
<b>Shock and Vibrations</b>		Per applicable standard	

